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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,896	09/07/2004	Hiroaki Tatematsu	HEIW:034	5425

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PARKHURST & WENDEL, L.L.P.
1421 PRINCE STREET
SUITE 210
ALEXANDRIA, VA 22314-2805

EXAMINER

ZEMEL, IRINA SOPJIA

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/506,896	Applicant(s) TATEMATSU ET AL.	
	Examiner Irina S. Zemel	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9-7-2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitation "preferably" does not actually limit the claims to the specifically recited value or characteristic, and, thus, does not further limit claims 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Art Unit: 1711

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 2003-49017 to Toray Ind. Inc., (hereinafter "Toray").

Toray discloses polyphenylene sulfide based foamed molded products which are suitable for optical parts and which are obtained by injection molding of PPS saturated with supercritical carbon dioxide. The reference further contemplates addition of various inorganic and fibrous fillers (as per claim 3) and addition of other polymers that can act as melt tension modifiers.

The reference does not add the relative density of the resulting foams, however, since the compositions are substantially identical to the claimed compositions and are obtained by the methods substantially identical to the methods disclosed in the instant application, it is reasonably believed that the claimed properties are inherently exhibited by the disclosed materials. The burden is shifted to the applicants to provide factual evidence to the contrary.

In respect to limitations of claims 2, (a) – similar inherency argument applies, and (b) – as discussed above, the claim does not actually recite any required limitation since limitation reciting "preferably" is not mandatory.

Claims 1-5 are rejected under 35 U.S.C. 102(e or a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 02/090085 to Trexel, Inc., (hereinafter "Trexel").

Trexel discloses injection molding of microcellular polymeric foams by saturating polymeric materials with supercritical gas (CO₂ or nitrogen). Among suitable polymers, polycarbonates and polyesters such as polyethylene terephthalates are disclosed on page 22. The reference further discloses addition of various additives including fillers and other additives which can act as viscosity modifiers. The reference further discloses a foamed and unfoamed articles of the same volume and the weight difference of about 10 %, which, by implication, satisfies the claimed relative density characteristic. See table on page 22. The preamble limitations "for use as optical base" is given weight only to the extent that the composition disclosed in the reference is capable of being used such. The disclosed composition is inherently capable for the claimed use because the claimed composition is believed to be identical to the composition disclosed in the reference. Therefore, the preamble limitation is anticipated by the reference. The burden is shifted to the applicant to provide convincing factual evidence to the contrary.

Claims 1-5 are rejected under 35 U.S.C. 102(a or e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US patent 6,403,663 to DeSimone et al., (hereinafter "DeSimone").

DeSimone discloses method of making foamed polymeric articles using supercritical carbon dioxide. See, for example, Injection Molding section in columns 7-

Art Unit: 1711

8. Suitable polymers disclosed in column 3 and suitable additives disclosed in column 4 fully correspond to the limitations recited in claims 3-5. Once again, the reference does not address the reference does not added the relative density of the resulting foams, however, since the compositions are substantially identical to the claimed compositions and are obtained by the methods substantially identical to the methods disclosed in the instant application, it is reasonable believed that the claimed properties are inherently exhibited by the disclosed materials. The burden is shifted to the applicants to provide factual evidence to the contrary. Also, the preamble limitations "for use as optical base" is given weight only to the extent that the composition disclosed in the reference is capable of being used such. The disclosed composition is inherently capable for the claimed use because the claimed composition is believed to be identical to the composition disclosed in the reference. Therefore, the preamble limitation is anticipated by the reference. The burden is shifted to the applicant to provide convincing factual evidence to the contrary.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US Patent 5,158,986 to Cha et al., (hereinafter "Cha").

Cha disclosed method of making foamed polymeric articles using supercritical carbon dioxide. See, for example, description of figure 18. Suitable polymers include polycarbonates as per column 6, line 61.

Once again, the reference does not address the reference does not added the relative density of the resulting foams, however, since the compositions are

Art Unit: 1711

substantially identical to the claimed compositions and are obtained by the methods substantially identical to the methods disclosed in the instant application, it is reasonable believed that the claimed properties are inherently exhibited by the disclosed materials. The burden is shifted to the applicants to provide factual evidence to the contrary. Also, the preamble limitations "for use as optical base" is given weight only to the extent that the composition disclosed in the reference is capable of being used such. The disclosed composition is inherently capable for the claimed use because the claimed composition is believed to be identical to the composition disclosed in the reference. Therefore, the preamble limitation is anticipated by the reference. The burden is shifted to the applicant to provide convincing factual evidence to the contrary.

Claim Rejections - 35 USC § 103

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Trexel in combination with JP62-50801 to Teijin Chem., (hereinafter "Teijin").

The disclosure of Trexel is discussed above. The reference expressly states that molded articles of ANY type can be produced by the methods of the invention, and specifically lists, for example, polycarbonates as suitable polymers. It is well known in the art that foamed polycarbonated are conventionally used for production of molded optical articles as those dclaimed in claim 6. See, for example, Teilin. Therefore, producing a specifically claimed optical articles from compositions disclosed by Trexel

Art Unit: 1711

and by the method of Trexel would have been obvious with reasonable expectation of adequate results.

Claim 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cha in combination with Teijin.

The disclosure of Cha is discussed above. Cha does not expressly disclosed what kind of moldings can be obtained by the disclosed method, but, as discussed above, expressly disclosed polycarbonates as suitable materials to produce foamed moldings. It is well known, as discussed above, in the art that foamed polycarbonated are conventionally used for production of molded optical articles as those dclaimed in claim 6. See, for example, Teilin. Therefore, producing a specifically claimed optical articles from compositions disclosed by Trexel and by the method of Trexel would have been obvious with reasonable expectation of adequate results. It is also notoriously known to add various fillers and additives to polycarbonate molding to improve its desired properties (also as contemplated, for example, by Teijin). Thus, invention as claimed would have been obvious from the combined teachings of the above cited references.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

Art Unit: 1711

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ISZ

Irina S. Zemel
Examiner
Art Unit 1711

